

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

☐ Coloured covers/
Couverture de couleur

☐ Covers damaged/
Couverture endommagée

☐ Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

☐ Cover title missing/
Le titre de couverture manque

☐ Coloured maps/
Cartes géographiques en couleur

☐ Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

☐ Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

☐ Bound with other material/
Relié avec d'autres documents

☐ Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

☐ Additional comments:/
Commentaires supplémentaires:

☐ Coloured pages/
Pages de couleur

☐ Pages damaged/
Pages endommagées

☐ Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

☒ Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

☐ Pages detached/
Pages détachées

☒ Showthrough/
Transparence

☐ Quality of print varies/
Qualité inégale de l'impression

☐ Continuous pagination/
Pagination continue

☐ Includes index(es)/
Comprend un (des) index

Title on header taken from:/
Le titre de l'en-tête provient:

☐ Title page of issue/
Page de titre de la livraison

☐ Caption of issue/
Titre de départ de la livraison

☐ Masthead/
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						✓					

INTERNATIONAL GEOLOGICAL CONGRESS.

TWELFTH SESSION, CANADA, 1913.

VICTORIA MEMORIAL MUSEUM,

OTTAWA.

June 7, 1913,

List of Leaders, Secretaries and Guides.

The following list of Leaders, Secretaries and Guides is believed to be correct to date but is subject to alteration.

Suggestions for any corrections and additions should be sent at the earliest possible moment to the Secretary, Twelfth International Geological Congress, Victoria Memorial Museum, Ottawa.

NOTE—A guide occupies an official position only over that portion of the route assigned to him. During the preceding and subsequent portions of the Excursion he becomes an ordinary member.

F. D. Adams.....A2, A7, C1	J. W. Goldthwait, A1, A10	J. E. NarrowayA11
J. A. Allan.....C1	J. C. GwillimC1, C2	T. NattressC5
J. A. Bancroft.....A1, A6, A7	R. C. GuilmontA7	W. NicolA9
L. W. BaileyA1	E. HaycockA1	W. A. Parks, A12, B3, B4, B7, C5
M. B. BakerA9, B8	R. HarvieA1, A5	A. L. ParsonsC1
A. E. BarlowA2, C1	H. E. T. Haultain.....C2	E. PoitevinA5
W. A. BellA1	A. O. HayesA1	P. QuenaiA1, C1
W. R. Billings.....A11	P. E. HopkinsA3	W. R. RogersA3
R. W. Brock.....C2, C5, C9	J. G. S. HudsonA1	P. E. Raymond ..A1, A11
L. D. BurlingA1, C1	J. E. HydeA1	H. S. de Schmid.....A5
A. G. BurrowsA3, C2	E. D. IngalA11	S. J. SchofieldC2
D. D. CairnesC5, C9	R. A. A. JohnstonA5	J. StansfieldA5, B7
C. CammellC2	W. A. Johnston ..A11, B9	C. R. StaufferA12, C5
C. H. ClappC1, C2	J. KeeleA10, B9	J. SterlingC2
J. M. ClarkeA1	E. M. KindleA1, C1	W. J. SuttonC1, C2
A. A. ColeA3, C5	S. KirkpatrickA9	F. B. Taylor, A4, B1, B5, B9, C5
A. P. Coleman, A3, A4, B1, B2, C1	C. W. Knight, A3, A5, C2	W. H. TwenhofelA1
E. T. CorkillA3, C5	L. M. LambeA1, C1	J. W. TyrrellA4
W. H. Collins, A3, C1, C2	A. C. LawsonC1	J. B. TyrrellA3, C1
R. A. DalyC1	W. W. Leach ..C2, C5, C9	W. L. UglowC1
T. C. DenisA5, C2	O. E. LeRoyC2	J. H. ValliquetteA6
W. J. DickA1, C2	E. LindemanA3, C5	C. D. WalcottC1
D. B. DowlingC2	G. G. S. Lindsey, B5, C2	T. L. WalkerA3, C5
J. A. DresserA, A5	R. G. McConnell, ..C5, C9	R. A. WallaceC1
C. W. DrysdaleC2	J. McEvoyC2	W. S. WernerA7
A. G. DufrenoyA7	D. McIntoshA1	E. J. Whittaker ..A11, C5
E. DulleuxA5	G. C. Mackenzie ..A3, A9	M. Y. Williams..A1, A12, C5
H. V. Ellsworth, A12, B3, C5	J. D. Mackenzie ..C1, C2	Miss A. E. Wilson.....B2
E. R. FaribaultA1	A. MacLeanC1	A. W. G. WilsonC2
O. S. FinnieC2	J. McLeishC1	M. E. Wilson, A3, A5, C2, C1
A. F. FoersteC5	W. H. McNairnA12	W. J. WilsonA11
A. J. GalbraithC5	A. MailhotA1, A5	W. J. WrightA1
R. P. D. Graham..A5, A7	L. MartinC5	G. A. YoungA1, A7
T. GrahamC2	G. F. MatthewA1	
	G. R. MickieA3	
	W. G. MillerA3, C5	

OEI
16
1913c

A1. Quebec and Maritime Provinces. Time, 10 days.

Sunday, July 13. Leave Montreal in evening.

Friday, August 1. Arrive in Ottawa in early morning.

Cost—Tourist, \$130.00, Standard \$150.00, Deposit \$14.00.

Leader—G. A. Young.

Associate Leaders—J. M. Clarke, E. R. Faribault.

Secretary—R. Harvie.

Assistant Secretary—A. Mallhiot.

Guides as follows:

Name	Place	Date
L. W. Bailey	Moncton and St. John	July 19th-30th
J. A. Bancroft	All	
W. A. Bell	Windsor to Moncton	July 21st-29th.
L. D. Burling	All	
J. M. Clarke	Gaspé and Head of Chaleur Bay	July 16th-19th.
W. J. Dick	Pictou, Sydney	July 23rd-24th.
A. O. Hayen	St. John	July 30th.
E. R. Faribault	All	
J. W. Goldthwait	All	
E. Haycock	Halifax to St. John	July 20th-30th.
J. G. S. Hudson	Sydney, Pictou	July 23rd-24th.
J. E. Hyde	Riversdale-Union, Sydney	July 22nd-25th.
E. M. Kindle	All	
L. M. Lambe	Dalhousie, Albert Mines	July 19th-29th.
E. Lindeman	Bathurst	July 19th.
G. F. Matthew	St. John, Sydney	July 23rd-25th-30th
D. McIntosh	Halifax, Oldham or Horton	July 20th-21st.
P. Quensel	All	
P. E. Raymond	All	
W. H. Twenhofel	All	
W. J. Wright	Oldham, Moncton	July 21st-29th.

A2. Haliburton-Brancroft (Ontario). Time, 7 days.

Thursday, July 24. Leave Montreal in evening.

Thursday, July 31. Arrive in Ottawa in late afternoon.

Leader—F. D. Adams.

Associate Leader—A. E. Barlow.

Secretary—G. C. Mackenzie.

Cost—\$50.00. Deposit, \$5.00.

Guides—None.

A3. Sudbury-Cobalt-Porcupine (Ontario). Time, 10 days.

Wednesday, July 23. Leave Montreal in morning, or leave Toronto in evening.

Saturday, August 2. Montreal.

Cost—Tourist, \$65.00, Standard, \$75.00. Deposit, \$7.00.

Leader—W. G. Miller.

Secretary—W. R. Rogers.

Guides as follows:

Name	Place	Date
A. G. Burrows	Timagami, Cobalt, Porcupine	July 28th-31st.
A. A. Cole	Timagami, Cobalt, Porcupine	July 28th-31st.
A. P. Coleman	Sudbury, Moose Mountain	July 24th-26th.
E. T. Corkill	Sudbury, Timagami, Cobalt, Porcupine	July 24th-31st.
W. H. Collins	All	
J. A. Dresser	Sudbury	July 24th-25th.
P. E. Hopkins	Timagami, Cobalt, Porcupine	July 28th-31st.
C. W. Knight	Timagami, Cobalt, Porcupine	July 28th-31st.
E. Lindeman	Moose Mountain	July 26th.
G. R. Mickie	Sudbury	July 24th-25th.
J. B. Tyrrell	All	
T. L. Walker	Sudbury	July 24th-25th.
M. E. Wilson	All	

A4. Niagara-Iroquois Beach (Ontario). Time, 3 days.

Monday, August 4. Leave Toronto in morning.
Wednesday, August 6. Arrive Toronto in evening.
Cost—\$20.00. Deposit, \$5.00.

Leader—A. P. Coleman.
Associate Leader—F. H. Taylor.
Secretary—W. R. Rogers.
Guides as follows:

Name	Place	Date
J. W. Tyrrell	Hamilton	
W. H. McNairn	All	

A5. Asbestos Deposits of the Province of Quebec. Time, 4 days.

Saturday, August 2. Leave Montreal in evening.
Thursday, August 7. Arrive in Toronto in morning.
Cost—\$40.00, including ticket and sleeping car berth in Toronto.

Leader—T. C. Denis.
Associate Leader—J. A. Dresser.
Secretary—H. Frechette.
Guides as follows:

Name	Place	Date
R. Harvie		
A. Mailhot		

A6. Morin Anorthosite Area (Province of Quebec). Time, 1 day.

Monday, August 4. Leave Montreal in morning and return in evening.
Cost—\$5.00. No deposit.

Leader—J. A. Bancroft.
Secretary—J. H. Valiquette.
Guides—R. P. D. Graham.

A7. The Monteregian Hills (Quebec). Time, 2 days.

Tuesday, August 5. Leave Montreal in morning.
Thursday, August 7. Arrive in Toronto in morning.
Cost—\$18.00, including ticket and berth in sleeping car to Toronto, but not including hotel or other accommodation in Montreal on Tuesday night. Deposit \$2.00.

Leader—F. D. Adams.
Secretary—W. S. Werner.
Guides—J. A. Bancroft, A. O. Dufresne, R. P. D. Graham, R. C. Guilmont, G. A. Young.

A8. Mineral Deposits of the Ottawa District. Time, 3 days.

Monday, August 4. Leave Montreal in morning.
Thursday, August 7. Arrive Toronto in morning.
Cost—\$22.00, including ticket and berth in sleeping car to Toronto.
Deposit, \$5.00.

Leader—J. Stansfield.
Secretary—M. E. Wilson.
Guides—E. Dulleux, H. S. DeSchmid, R. A. A. Johnston, C. W. Knight, E. Poitevin.

A9. Mineral Deposits Near Kingston (Ontario). Time, 3 days.

Monday, August 4. Leave Kingston in morning.
Wednesday, August 6. Arrive in Toronto in afternoon.
Cost—\$20.00, including hotel Tuesday night at Kingston. Deposit, \$5.00.

Leader—W. Nicol.
Associate Leader—M. B. Baker.
Secretary—S. Kirkpatrick.
Guides—G. C. Mackensie.

A10. Pleistocene—Montreal and Ottawa. Time, 3 days.

Monday, August 4. Leave Montreal in the morning.
Thursday, August 7. Arrive in Toronto in morning.

Cost—\$20.00. Deposit, \$5.00.

Leader—J. W. Goldthwait.

Secretary—L. H. Cole.

Guides—J. Keele, W. A. Johnston.

A11. Ordovician—Montreal and Ottawa. Time, 3 days.

Monday, August 4. Leave Montreal in morning.

Thursday, August 7. Arrive in Toronto in morning.

Cost—\$22.00. Deposit, \$5.00.

Leader—P. E. Raymond.

Secretary—E. D. Ingall.

Guides—L. D. Burling, E. M. Kindle, W. R. Billings, J. E. Narraway.

A12. Southwestern Ontario. Time, 3 days.

Monday, August 4. Leave Toronto in morning.

Wednesday, August 6. Arrive in Toronto in evening.

Cost—\$22.00. Deposit, \$5.00.

Leader—W. A. Parks.

Secretary—W. Harvey McNairn.

Guides—C. R. Stauffer, H. V. Ellsworth, M. Y. Williams.

"B" EXCURSIONS—August 7th-14th.

Guides as follows:

- B1. A. P. Coleman, F. B. Taylor.
- B2. A. P. Coleman.
- B3. W. A. Parks, H. V. Ellsworth, Miss A. E. Wilson.
- B4. W. A. Parks, J. Stansfield, H. V. Ellsworth.
- B5. F. B. Taylor.
- B6. G. G. S. Lindsey.
- B7. W. A. Parks, J. Stansfield, H. V. Ellsworth.
- B8. M. B. Baker, J. Keele.
- B9. W. A. Johnston, F. B. Taylor, J. W. Goldthwait.
- B10. C. W. Knight, J. A. Bancroft, W. G. Miller.

C1. Transcontinental via Canadian Pacific Railway and Canadian Northern Railway. Time, 23 days.

Thursday, August 14. Leave Toronto in evening.
 Saturday, September 6. Arrive Toronto in evening.
 Cost—Tourist, \$200.00; Standard, \$225.00. Deposit, \$20.00.
 Leader—F. D. Adams.
 Associate Leader—J. B. Tyrrell.
 Secretary—J. McLeish.
 Assistant Secretary—H. S. DeSchmid.
 Guides as follows:

Name	Place	Date
J. A. Allan	Calgary, to Kamloops	Aug. 20th-25th.
A. E. Barlow	Coldwell, Banff to Golden	Aug. 15th-20th-23rd
L. D. Burling	Field	Aug. 22nd.
C. H. Clapp	Victoria	Aug. 26th-27th.
A. P. Coleman	Sudbury	Sept. 5th.
W. H. Collins	Iron Spur to Fort Frances	Aug. 16th-17th.
R. A. Daly	Banff to Vancouver	Aug. 20th-25th.
J. C. Gwillim	Calgary	Aug. 30th.
W. A. Johnston	Fort Frances to Winnipeg	Aug. 17th.
E. M. Kindle	Stonewall, Stoney Mountain, Snake Island	Aug. 18th-Sept. 1st
L. M. Lambe		
A. C. Lawson	Iron Spur to Fort Frances	Aug. 16th-17th.
A. MacLean	Ethelbert, Pine River, Stoney Mountain	Aug. 18th-Sept. 1st
R. G. McConnell	Banff to Golden	Aug. 20th-23rd.
A. H. Parsons	Kenora, Port Arthur, Loon Lake	Sept. 2nd-3rd.
P. Quensel		
W. J. Sutton	Victoria	Aug. 26th-27th.
W. L. Uglov	Iron Spur to Fort Frances	Aug. 16th-17th.
C. D. Walcott	Field	Aug. 22nd.
R. A. Wallace	Iron Spur to Fort Frances, Stoney Mountain, Stonewall	Aug. 16-18th.
M. E. Wilson	Iron Spur to Fort Frances	Aug. 16th, 17th.

C2. Transcontinental via Canadian Pacific Railway, Grand Trunk Pacific Railway, and National Transcontinental Railway.
Time, 23 days.

Thursday, August 14. Leave Toronto in evening.

Saturday, September 6. Arrive in Toronto in morning.

Cost—Tourist, \$300.00; Standard, \$223.00. Deposit \$20.00.

Leader—R. W. Brock.

Associate Leader—J. McEvoy.

Secretary—H. E. T. Haultain.

Assistant Secretary—H. Frechette.

Guides, as follows:

Name	Place	Date
J. A. Allan	Glacier to Mount Robson	Aug. 28th-31st.
A. G. Burrows	Nipigon to Cochrane, Porcupine, Cobalt	Sept. 3rd-5th.
C. Cammell	Phoenix to Victoria	Aug. 21st-26th.
C. H. Clapp	Victoria	Aug. 25th-26th.
W. H. Collins	Winnipeg to Nipigon	Sept. 2nd-3rd.
T. C. Denis		
W. J. Dick	Hillcrest to Fernie, Nanaimo	Aug. 18th-19th-25th
D. B. Dowling	Winnipeg to Fernie, Calgary to Edmonton, Mt. Robson to Winnipeg	Aug. 16th-20th.
C. W. Drysdale	Rossland, Phoenix, Kamloops to Savona	Aug. 21st-24th.
O. S. Finnie	Hillcrest to Fernie	Aug. 18th-19th.
T. Graham	Corbin, Fernie, Nanaimo	Aug. 18-19-25th.
J. C. Gwillim	Hillcrest to Elko, Corbin	Aug. 18th-19th.
C. W. Knight	Porcupin, Cobalt	Sept. 4th-5th.
W. W. Leach	Hillcrest to Elko, Corbin	Aug. 18th-19th.
O. E. LeRoy	Slocan, Kootenay Landing to Phoenix	Aug. 30th-26th.
G. G. S. Lindsey		
J. D. Mackenzie	Nanaimo	Aug. 25th.
A. MacLean	Stoney Mountain	Aug. 16th.
H. Ries		
S. J. Schofield	Elko to Kootenay Landing	Aug. 30th.
J. Sterling	Medicine Hat to Coleman, Edmonton	Aug. 17-18-19th.
W. J. Sutton	Victoria	Aug. 25th-26th.
C. D. Walcott	Mt. Robson Station and vicinity	Aug. 30th-31st.
R. A. Wallace	Stoney Mountain	Aug. 16th.
A. W. G. Wilson	Phoenix	Aug. 21st.
M. E. Wilson	Porcupine, Cobalt	Sept. 4th-5th.

C5. Lake Erie and Huron. Time, 13 days.

Friday, August 15. Leave Toronto in morning.

Thursday, August 28. Return to Toronto in evening.

Cost—\$125.00. Deposit, \$12.00.

Leader—W. A. Parks.

Associate Leader—T. L. Walker.

Secretary—A. J. Galbraith.

Guides, as follows:

Name	Place	Date
A. F. Foerste	Manitoulin Island (Ordovician)	Aug. 22nd-26th.
M. Y. Williams	Manitoulin Island (Silurian)	Thedford. Aug. 20-22-26th.
H. V. Ellsworth		
F. B. Taylor and assistant	Niagara	Aug. 15th.

C6. Sudbury-Cobalt-Porcupine (Ontario). Time, 9 days.

Friday night, August 15th. Leave Toronto.

Sunday morning, August 24th. Arrive in Toronto.

Cost—Tourist, \$58.00; Standard, \$67.00. Deposit, \$6.00.

Leader—W. G. Miller.

Secretary—P. E. Hopkins.

Guides, as follows:

Name	Place	Date
A. G. Burrows	Timagami, Cobalt, Porcupine	
A. A. Cole	Timagami, Cobalt, Porcupine	
E. T. Corkhill	Sudbury, Cobalt, Porcupine	
J. A. Dresser	Sudbury	
C. W. Knight	Sudbury, Cobalt, Porcupine	
E. Lindeman	Moose Mountain	
G. C. MacKenzie	Moose Mountain	

C8. Yukon and Malaspina. Time, 25 days.

And

C9. Prince Rupert and Skeena River (British Columbia). Time, 7 days.

Wednesday, August 27. Leave Vancouver by boat.

Tuesday, September 2. Arrive at Vancouver.

Cost—C8.—\$350.00. Deposit, \$40.00.

C9. \$100.00. Deposit, \$10.00.

Leader—R. G. McConnell.

Secretary—

Assistant Secretary—

Guides, as follows:

Name	Place	Date
R. W. Brock		
D. D. Cairnes	Whitehorse to Dawson	
W. A. Johnston		
W. W. Leach	Hazelton	
L. Martin	Skagway to Yakutat	
W. F. Robertson	Hazelton	